Canadian
Environmental
Advisory
Council

Annual Review 1979-1980

A DECADE OF ENVIRONMENTAL CONCERN:
RETROSPECT AND PROSPECT

ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS:
OBSERVATIONS AND RECOMMENDATIONS

Canadian
Environmental
Advisory
Council

Annual Review
1979-1980

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December 31, 1979

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Toronto, Ontario
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Ottawa, Ontario
K1A 0H3

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Canadian Environmental Advisory Council | Conseil consultatif canadien de l'environnement

December 31, 1981

The Minister
Department of Environment
Ottawa
Ontario

Dear Mr. Minister:

We are pleased to transmit to you this report of the Canadian Environmental Advisory Council for the period 1979-1980.

As with its predecessors, this report contains a record of Council's activities over the period covered, and includes the recommendatio s resulting from the fourth and fifth meetings with the provincial environmental advisory councils.

Following the general report on activities, which includes a revised statement of the role of the Council, is a commentary on the recent history of environmental concern in Canada and a review of the Environmental Assessment and Review Process.

In publishing this Annual Review, it is Council's intent to make some of our concerns about the environment known to the interested public of Canada, and to continue to bring to your attention the recommendations arising from our discussions and reviews.

Yours sincerely,

D.A. Chant
Chairman

T. Beck
Vice-Chairman

R. Bergeron
Vice-Chairman

Ottawa, Canada
K1A 0H3

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K1A 0H3

CANADIAN ENVIRONMENTAL ADVISORY COUNCIL

The Canadian Environmental Advisory Council was established in 1972 by decision of the federal Cabinet, to advise the Minister of the Environment on:

- such matters as may specifically be referred to it by the Minister;
- the state of the environment and threats to it;
- the priorities for action by the federal government or by the federal government jointly with the provinces;
- the effectiveness of activities of the Department of the Environment in restoring, preserving or enhancing the quality of the environment.

The Council is composed of up to sixteen members who serve in an individual capacity and are drawn from a wide cross-section of Canadian life and from all across Canada. Officials of the Department of the Environment are not members of the Council; however the Department provides a continuing Secretariat.

To carry out its functions the Council undertakes studies and reviews of matters of environmental concern and policy, holds regular meetings to consider progress and developments with regard to these concerns, and prepares comments, statements and reports as appropriate. The Council publishes an *Annual Review* which includes a summary of the state of the environment in Canada, and from time to time reports on other matters of general interest and importance.

Enquiries concerning the work of the Council and requests for Council publications should be addressed to:

The Executive Secretary
Canadian Environmental Advisory Council
c/o Department of the Environment
Ottawa, Canada
K1A 0H2

Ce rapport est aussi disponible en français

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LIST OF PUBLICATIONS

Annual Review 1973-1974. Part A - Activities 1973-1974 by Arthur Porter. Part B - Problems and Priorities in the Canadian Environment by Pierre Dansereau.

Annual Review 1975. Part A - Activities 1975 by Ian McTaggart-Cowan. Part B - Significant Canadian Environmental Problems by J.P. Nowlan.

Annual Review 1976. Part A - Activities 1976. Part B - The State of the Canadian Environment 1976.

Annual Review 1977-1978. Part A - Activities 1977-1978. Part B - The State of the Canadian Environment.

An Environmental Impact Assessment Process for Canada. Council Report No. 1, February 1974.

An Environmental Ethic - Its Formulation and Implications. Council Report No. 2, January 1975. By Norman H. Morse.

Harmony and Disorder in the Canadian Environment. Occasional Paper No. 1. By Pierre Dansereau. Council Report No. 3, 1975.

Environmental Aspects of Nuclear Power Development in Canada. Occasional Paper No. 2. By H.E. Duckworth, H.W. Duckworth, Arthur Porter and J.S. Rogers. Council Report No. 4, 1977.

Towards an Environmental Ethic, March 1977. By D.A. Chant.

Report of the Second Joint Meeting of Environmental Advisory Councils. May 1977, Fort San, Saskatchewan. Council Report No. 5, March 1978. Produced in collaboration with the Saskatchewan Environmental Advisory Council.

The Management of Estuarine Resources in Canada. Council Report No. 6, March 1978. By Irving K. Fox and J.P. Nowlan.

Reports of the First and Second Meetings of Public Interest Groups with the Canadian Environmental Advisory Council. Council Report No. 7, May 1978.

Ecotoxicity: Responsibilities and Opportunities. Council Report No. 8, August 1979. By Ross H. Hall and Donald A. Chant.

Report of a Meeting between the Public Interest Groups and the Canadian Environmental Advisory Council, May 26-27, 1980. Council Report No. 9, April 1981.

A New Approach to Pest Control In Canada. Council Report No. 10, July 1981. By Ross H. Hall.

ACTIVITIES 1979-1980

MEETINGS

In 1979, Council held six full meetings, all in Ottawa except for one meeting at the University of Toronto and one in Winnipeg at the time of the annual assembly with provincial councils. The executive committee met on four occasions and participated in a special meeting in November between the Minister and representatives of environmental groups.

In 1980, seven meetings took place, four in Ottawa and one each in Québec, St. Andrews and Calgary. The executive met four times, twice in Toronto, once in Ottawa and once in Edmonton.

MEMBERSHIP

Dr. D.A. Chant was appointed chairman in October 1979, succeeding Dr. I. McTaggart-Cowan who retired from the Council. Dr. R.B. Bergeron and Mr. T. Beck were appointed as vice-chairmen, and Dr. P. Garigue, reappointed for another year as an ordinary member, retired in October 1980. Dr. D. Ahanekew resigned from the Council in October 1979, Ms. M.J. Loveys in March 1980 and Mr. R. Brown in July 1980. Four new members joined Council in October 1980: Professor A.R. Lucas, Ms. N. MacPherson, Dr. P.F.M. McLoughlin and Dr. P. Meincke. Dr. R.H. Hall was reappointed for a term of two years. The affiliations of the members are listed on page ii.

ACTIVITIES

Council called on a number of officials of the Department of Environment to attend meetings to discuss topics of interest: Mr. H.L. Ferguson, Dr. J.D. McTaggart-Cowan, Dr. H. Martin, Dr. G. McBean, Mr. G.E. Wells and Mr. M. Rivers regarding long range transport of airborne pollutants, in particular the problem of acidic precipitation; Mr. B. Felske concerning socio-economic impact analysis; Dr. J.S. Maini and Mr. R. Lawford on departmental science policy; Mr. M. McConnell on the activities of the Canadian Council of Resource and Environment Ministers; Mr. J.W. Maxwell on the environmental aspects of recreation and tourism; Mr. C.A. Lewis, Mr. R.H. Weir and Dr. J.D. Kingham on offshore developments; Dr. P.M. Bird on the nuclear policy inquiry; Mr. A.T. Davidson on parks policy; Mr. T. Lash on ecological reserves; Mr. P. Wilson on transboundary issues; Dr. J. Fitzpatrick on environmental indicators; Dr. D.R. Redmond on forestry policy; Dr. J.S. Tener, Mr. W. Brackel and Mr. C.S. Lewis on the role of the Department in the North; Mr. R. Taillon on the James Bay and Northern Québec Agreement; Mr. J. Klenavic, Mr. J. Herity and Mr. C.D. Robertson on the revision of the FEARO terms of reference; and Dr. J.E. Brydon on environmental protection policy. Mr. Roger Simmons, parliamentary assistant to the Minister of Environment, attended a meeting on behalf of the Minister.

Dr. H. Harvey, University of Toronto, contributed to the discussion of the effects of acidic precipitation on Ontario lakes and Dr. M. Ruel, Indian & Northern Affairs, on ecological reserves. Dr. A.L. Hamilton, International Joint Commission, reviewed a number of boundary water issues, and Dr. T.L. Perry of Vancouver sought Council's support regarding the Skagit Valley controversy. Ms. B. Olivastri, National Survival Institute, briefed Council on recent activities of the public interest groups. Mr. E.R. Bushett, Economic Resources Conservation Board of Alberta, and Mr. A.D. Crerar, Environmental Council of Alberta, described the activities of their organizations. Mr. A. New and Mr. R. Doyle, Secretary of State Department, were invited to explain the funding policies of the Assistance to Community Groups Program.

To continue and extend the relationship between Council and the Department, the Regional Directors-General were invited as the occasion permitted to attend and participate in several meetings. Members of Council also attended regional board meetings in Québec, Ontario and the Northern & Western Regions.

In November 1979, after discussions with representatives of public interest groups, officials of concerned federal departments, provincial and territorial officials, industrial organizations and the Canadian Environmental Law Association, Council submitted a review of the Environmental Assessment and Review Process (EARP) to the Minister. The full text of this report is contained in this Annual Review. Council is maintaining its interest in the development of EARP and the Federal Environmental Assessment and Review Office (FEARO).

Council Report No. 8, *Ecotoxicity: Responsibilities and Opportunities*, which was summarized in the *1977-78 Annual Review*, appeared in December 1979. Council has underway substantive studies on pesticides in the environment and on the management of wildlife resources in the North, both of which are intended for publication.

Recommendations, critiques or expressions of concern were transmitted to the Minister in 1979 and 1980 on a range of topics which included federal forestry policy; the impact of foreign aid projects; the Skagit valley issue; the parliamentary inquiry on nuclear power; Polar Bear Pass ecological site on Bathurst Island; environmental aspects of the Dempster Highway; the Toxic Chemicals Management Plan; response to tanker spills; the impact of certain mining developments; science policy in Environment Canada; Kluane Park development; Alaska Highway gas pipeline environmental considerations; the uncontrolled slaughter of northern caribou; ecological reserves; the role of Environment Canada in the North; public participation policy; long range transport of acidic pollutants; and environmental protection policy.

Council is maintaining its interest in science policy in the Department of the Environment, the role of the Department in northern Canada, the management of national parks, forestry policy and continues to urge action concerning the establishment of ecological reserves.

In June 1980, the fourth assembly of environmental public interest groups was organized by Council. The Proceedings of this meeting will be published by the Council. Eleven briefs on selected issues (public participation, pesticides management, hazardous substances, forestry management, wildlife, water quality, energy, acid precipitation, nuclear wastes, urban environment, international affairs and financing of public interest groups) were presented to the Minister of Environment. The Canadian Environmental Advisory Council has consistently taken the position that it should not be perceived as the only or indeed the major point of contact between the interest groups and the Department. It took the initiative in facilitating contact among the groups and provided financial support for the first four meetings. Concurrent with the development of a broader policy of public participation, the Department has agreed to take responsibility for organizing future meetings of this kind.

The Chairman and Vice-Chairman (Dr. Bergeron) visited Washington to confer with members of the US Council on Environmental Quality, where issues of common interest were discussed, in particular the problem of acid rain and the regulation of offshore hydrocarbon development. The Chairman participated in the process of selection of a new executive chairman of the Federal Environmental Assessment Review Office.

MEETINGS OF ENVIRONMENTAL ADVISORY COUNCILS

The meeting organized through the initiative of the Canadian Environmental Advisory Council in 1975 which brought together representatives of the various environmental advisory bodies in the provinces has become established as an annual assembly. In June 1979, the Manitoba Environmental Council hosted the third such assembly at Hecla Island on Lake Winnipeg. A year later, the councils met at St. Andrews, New Brunswick, at the invitation of the Environmental Council of New Brunswick.

It has been the practice of these assemblies to review their activities, successes and failures and to address matters of mutual environmental concern. At the second meeting, held in Saskatchewan, a number of resolutions on matters of environmental consequence were developed, and forwarded to the Canadian Council of Resource and Environment Ministers, in the expectation that they would be considered worthy of serious attention, having been endorsed by a nation-wide group of concerned environmental advisors. These resolutions are also taken back to the respective councils for discussion and endorsement and eventual forwarding to the individual ministers. Subsequent meetings have all produced resolutions or recommendations of this kind.

At Hecla Island, in 1979, the agenda dealt primarily with the problem of *hazardous wastes*. In 1980, at St. Andrews, the topics addressed were *long range transport of atmospheric pollutants, shore zone management, land use,* and *ecological reserves*. Participants agreed that the following resolutions would be brought before the constituent councils, and if ratified (perhaps with modifications depending on local circumstances), would be forwarded to the councils' respective ministers.

RESOLUTIONS OF THE FOURTH MEETING OF ENVIRONMENTAL ADVISORY COUNCILS

Resolution I - Federal/Provincial Relationships

That the Councils should endorse the stated Environmental Protection Service Policy to maintain and strengthen interprovincial and international cooperation;

That the Councils should accept the need for federal/provincial interaction and agreement with emphasis on the following jurisdictional areas:

Federal - importation, registration, licensing, labelling and manufacture of hazardous products and their inter-provincial transport, mediation of trans-boundary disputes;

Provincial - manufacture, sale, use and disposal of hazardous materials

It is understood that any provincial jurisdiction has the right to impose more stringent regulations if it so desires.

Resolution II - Research and Professional Training

In contrast to classical toxicology, which is the study of the harmful effects of single chemicals on individual and populations of animals under controlled conditions, ecotoxicology is a discipline which studies the harmful effects of toxic agents and complexes of such agents on entire ecosystems.

In order to increase the number of trained toxicologists and ecotoxicologists, the Councils should:

a) urge granting agencies to provide substantially greater funding for training and research in toxicology;

b) urge provincial governments to recognize that toxicology and ecotoxicology are important subjects for advanced study;

c) urge Canadian universities to recognize ecotoxicology as a discipline in its own right, and give appropriate attention to this discipline;

d) urge that priority be given to the establishment of centres for research, testing and dissemination of information in the field of ecotoxicology.

Resolution III - Public Education

That Councils urge that educational programs on the selection, safe handling, use, and disposal of hazardous materials should be given a high priority.

Resolution IV - Financing of Long Term Disposal of Hazardous Wastes

That an environmental protection fund should be established, involving the federal and provincial governments and those industries concerned with hazardous wastes, to provide for the financing of hazardous wastes disposal where the originator cannot be identified or can no longer be held responsible.

Resolution V - Incentives

That governments should consider appropriate financial incentives and penalties to assure proper evaluation of the environmental consequences of domestically produced and imported toxic substances.

Resolution VI - Monitoring of Toxic Substances

That the scope and governmental monitoring of hazardous materials should be extended in order to secure adequate baseline data.

Resolution VII - Introduction of New Chemicals

That more stringent regulations should be placed on the introduction of new chemicals into the environment, with the burden of proof of their acceptability in the environment, within specified limits, to be placed on the manufacturers; and that governments, at the appropriate levels, should develop suitable mechanisms for monitoring company data.

Resolution VIII - Environmental Impact Assessment

That environmental impact assessment procedures should be extended to include any government program involving a potential hazardous material.

Resolution IX - Master List of Toxic Chemicals

That the federal and provincial governments should consider the desirability of establishing a master list of toxic chemicals, their acceptable concentrations, manufacture, handling and disposal.

Resolution X - Review of Legislation by Councils

That Councils should review the present status of legislation in their respective jurisdictions with respect to the following recommendations:

a) that there should be an obligation to specify, by regulation, toxic chemicals and their maximum permissable concentration in the environment;

b) that where this is not yet stated policy, a specific time limit should be established for arriving at such regulation;

c) that maximum concentrations should be established from the most conservative approach possible, given present technology, and that such criteria should be reviewed on a regular basis to ascertain if they can be lowered;

d) that there should be a legal obligation on the provincial control agencies to take immediate action when hazards arise.

Resolutions XI - Acid Precipitation

Because of the demonstrated ongoing chemical change of Canadian water bodies and vegetation due to long range airborne pollution, the Councils should urge that federal and provincial governments, acting in concert, take immediate steps to determine the magnitude of the problem and means to ameliorate the situation on a national and international basis.

Resolution XII - Freedom of Information

It was agreed that Councils should consider the federal council's recommendations on toxicity in general, and in particular the endorsement of recommendation A-7 on freedom of information.

Recommendation A-7 states:

> *"To facilitate research on and understanding of ecotoxicity as widely as possible, we recommend that all toxicological and analytical data held by the federal government, or submitted to it by industry to support the use of a chemical, be in the public domain. This freedom of access should also apply to statistics on amounts in use".*

In 1980, at St. Andrews, two workshops produced recommendations concerning *shore zone management* and *long range transport of atmospheric pollutants* (acid rain). An additional topic addressed by some of the participants resulted in resolutions regarding *ecological reserves*.

A third workshop, on *land use practices*, resulted in a thoughtful discussion paper, but the assembly considered that the subject was too complex to do justice to in the time available, and recommended that the councils study it and report their conclusions at the next meeting. Nevertheless, the session unanimously endorsed the statements that land use practices have important effects on the environment and therefore Ministers of the Environment have some responsibility to ensure that good land use is practised.

RECOMMENDATIONS OF THE FIFTH MEETING OF ENVIRONMENTAL ADVISORY COUNCILS

Shore Zone Management

The Joint Canadian Environmental Advisory Councils go on record as strongly supporting the principles of Shore Zone Management agreed to by the Canadian Council of Resource and Environment Ministers (CCREM).*

The Canadian Environmental Advisory Councils recognize that the imminent production of off-shore oil and gas necessitates a system of short (exploration) and long term shore zone planning that will minimize adverse environmental effects.

In carrying forth the principles endorsed by the CCREM we recommend that priority be given to the following areas of concern:

a) Identification of renewable and non-renewable resources which could be adversely affected;

b) The necessity for relevant basic and applied research;

c) The development of appropriate physical and institutional models;

d) The identification of sensitive ecological areas within shore zones;

e) The necessity of environmental impact study for any significant project;

f) The development of appropriate public information programs.

The implementation of the foregoing necessitates a close cooperation amongst all levels of involved governments.

**Shore Management Symposium Proceedings*, Canadian Council of Resource and Environment Ministers, April 1980.

Long Range Transport of Atmospheric Pollutants

The joint meeting of Canadian Environmental Councils, having examined and considered the subject of Long Range Transport of Atmospheric Pollutants (LRTAP) find that:

1. Acid precipitation is a serious international and inter-jurisdictional problem which is threatening to increase rapidly due to conversion to higher sulphur fuels;

2. Irreversible damage to aquatic resources and serious health impairment, both due to atmospheric sulphur, are well documented;

3. Progress is being made in the knowledge of atmospheric chemistry and transmission of sulphur compounds. However, little is yet known about the behaviour of nitrogen oxides, or of the organic and inorganic air contaminants such as PCBs, dioxin, mercury, etc;

4. Effective control of these emissions requires formal agreements between jurisdictions. Although the International Joint Commission is involved in air pollution as it affects transboundary waters, the issue far outreaches its present mandate, and there appears at present to be neither international nor federal/provincial frameworks appropriate for such control; and

5. The solution of the problem will require a systematic approach combining accelerated research, reduction of emissions and the application of ameliorative techniques;

and therefore we recommend that all Ministers of the Environment:

a) Urge the Government of Canada to increase its efforts towards conclusion of a treaty with the United States for correction and control of our mutual problems of LRTAP;

b) Urge their own governments to pursue intergovernmental collaboration and be prepared to enter into an interjurisdictional arrangement;

c) Urge their own governments to accelerate education and research in atmospheric chemistry and the effects of airborne pollutants; and

d) Examine the alternatives available for mitigating the effects of past airborne pollution.

Ecological Reserves

It was resolved:

a) That the joint councils request the Federal Minister of the Environment to pursue vigorously the creation of Ecological Reserves on appropriate federal lands throughout Canada;

b) That the Joint Councils request the Canadian Environmental Advisory Council to pursue with the Federal Minister of the Environment that his Department support a National Ecological Reserves Coordinating Committee. The committee would function as a clearing house for information on ecological reserves in Canada.

Land Use Workshop Committee Report

The working group on Land Use considers that the most important point for Councils to emphasize is that land use practices are central elements in environmental issues and therefore, the achievement and maintenance of good land use practices are important responsibilities of Environment Ministers and authorities.

Principles

The working group established some general statements of principle that lie behind actions that Councils can take in this area:

1. Proper land use maintains a balanced and healthy ecosystem;

2. Good land use, over time, is sound economics and profitable sustained resource use; and

3. The achievement of good land use practices on a broad basis depends upon it being to the citizen's advantage to take a long term view of the quality and productivity of land in his/her day to day actions.

Influences on Land Use Practices

The group recognizes that there are many influences and factors that are the cause of present land use practices and which make change of practice difficult. Chief among these are:

1. Economic realities and constraints affecting agriculture, forestry, mining, urban growth, etc;

2. Multiple jurisdictions at all levels of government which affect the use of land and lead to overlapping and conflicting policies where there is no central body with responsibility for maintaining good land use practices;

3. Traditional philosophy in Canada that land is a commodity to be used, and that natural resources are very extensive and little affected by human actions, has made it difficult to develop an attitude of husbandry or to develop political policies to preserve land capability.

Recommendations

The working group makes the following recommendations to the Councils:

1. *Recognition that the use made of land is an environmental issue:*

Councils are urged to impress upon their Ministers of Environment that land use and the control of land use practices are essential components of their environmental responsibilities. While many agencies and jurisdictions have policies, responsibilities and activities that affect the use of land, the Ministers of Environment should be held responsible for ensuring that proper land use practices are carried out in their territories.

2. *Coordination of responsibilities and decision making with regard to land use:*

In recognition of the many and diverse agencies with responsibilities affecting land use practices, Councils should press for establishment of coordinating mechanisms to obtain information about land use in order to develop appropriate policies to achieve improvement of land use practices.

Specific responsibilities for enforcement of good land use practices should be identified.

3. *The need for better information and understanding:*

Councils should urge Provincial and Federal agencies concerned with support of scientific research to recognize the need for increased and sustained study of land use problems including:

a) Improved methods and technologies for determining land capability and compiling inventories of land use;

b) Methods of identifying and predicting the biophysical consequences of different land use practices or changes in land use and their implications for land productivity and capability; and

c) Methodology for identifying, quantifying, predicting or evaluating the economic and social consequences of land use changes.

4. *Citizen awareness, concern and action:*

Councils should urge that information relevant to land use and the effects of land use practices be collected and made available to the public in order to improve citizens' understanding so that they will call for political action to achieve improved land use practices.

In order to obtain this awareness, the following are recommended:

a) A land use information system should be developed. This system should be designed (i) with the needs of users in mind; (ii) to be able to produce information whenever required even when data are not complete; (iii) to make use of and coordinate data from several sources; and (iv) to take full advantage of new techniques of information gathering and presentation such as remote sensing, computerized cartography, etc.

b) Land use information should comprise: (i) inventories of land use; (ii) data on changes in land use obtained through regular and systematic monitoring; and (iii) interpretations of land use data in economic and social terms related to identified time periods and socio-economic assumptions.

c) There should be a review of land classification criteria in an environmental context so that the established uniform land use classifications are not misused or misinterpreted but can provide the basis for more useful land capability assessments in each regional or socio-economic situation.

d) To make land use information and concerns available and useful to citizens at large, it is necessary to prepare educational materials on land use for both formal and informal instruction, and to devise and carry out publicity and educational programs.

Ministers of the Environment have responsibilities to initiate and contribute to such programs.

5. *Financial aspects of improving land use:*

a) Councils should urge their Ministers of Environment in concert with the financial and taxation authorities: (i) to undertake a systematic investigation of the effects of current real property assessment and taxation policies on land use practices; (ii) to establish a regular procedure whereby the effect on land use practices is considered when any new government fiscal, resource development, or urban development programs are decided upon.

b) Councils should urge that sustained land capability and productivity in relation to current land use practices be taken into account when establishing: quotas for agricultural or forestry production, market targets, incentives for summer fallowing or crop change.

c) Councils should urge Ministers of Environment together with Ministers of Agriculture, Forestry and Municipal development to undertake a program for the identification and development of long term incentives for good land use practices. This program should include incentives for maintenance of land capability and where appropriate, for renewal of land productivity through planned multiple or sequential land uses.

d) Councils should urge that the increased information about land capability and land use practices resulting from modern technology and better understanding of the socio-economic effects on resource management be applied to the development of better methods of identifying and defining land units in terms of land use capability for tax assessment, tax deferral, development zoning, or resource planning purposes.

ROLE OF THE CANADIAN ENVIRONMENTAL ADVISORY COUNCIL

The terms of reference shown on p.iv express the general mandate of the Canadian Environmental Advisory Council at the time of its establishment in 1972. From time to time, as Council gained experience, it has re-examined and revised its role as Council itself perceived it. The following statement, endorsed by the Minister of Environment, is the most recent articulation of this role.

- Identify important Canadian environmental problems, concentrate on the on the definition and analysis in principle of their biological, physical and social aspects and generate independent advice for the Minister on the best routes to be followed toward their solution.

- Identify and define environmental problems of a more global nature:

  a) which Canada shares with neighbouring countries; and

  b) which affect Canadians as members of the world population.

- Receive requests and instructions from the Minister on environmental issues and actions, and respond with advice and recommendations.

- Anticipate and identify emerging issues and bring them to the attention of the Minister.

- Examine the environmental implications or effects of government action or inaction on the development of perceived and coherent government policy.

- Keep abreast of current environmental problems so as to be readily responsive to requests from the Minister.

- Evaluate the processes of environmental assessment and control so as to be able to identify apparent successes and failures and to propose improvements in their procedures and coordination.

- Communicate with the Canadian public on environmental issues and provide a focus for the expression of their concerns.

- Provide the Minister with independent views on the performance of the Department in meeting its responsibilities.

- Work with the Minister and the Department in support of non-governmental environmental groups.

- Maintain liaison with the provincial and territorial environmental councils.

- Produce, as part of an annual report, an overview of the successes and failures of environmental activities in Canada, the lessons and the perceived issues.

Being neither a public interest group or an agent of any group, nor a part of the Department, but the Minister's advisory council reporting directly to him, the role of the Council is to speak as independently and forthrightly as possible. It is not simply to tell the Minister or the Department or the public of Canada pleasant, uncontroversial things but to "tell it as we see it" and thus at times its comments may be irritating, unpleasant or embarrassing.

A DECADE OF ENVIRONMENTAL CONCERN: RETROSPECT AND PROSPECT

D.A. Chant

In this report, I intend from the perspective of the years 1979 and 1980 first to look back at the environmental issues of the past decade: *where have we been and what have we accomplished?;* and then to look forward into the uncertainties and unknowns of the next decade: *where are we going and what can we hope to accomplish?*

As one reviews the environmental affairs of the 70's, a number of issues are noteworthy. Firstly, I am struck by the fact that, despite the doom and gloom that sometimes settles on even the most optimistic of us, we in Canada have achieved a number of environmental "successes" in the last ten years. These range from the control of specific pollutants to quantum changes in the attitudes and perceptions of the society in which we live towards the environment.

1. The banning of some particularly harmful pesticides, and generally better control of pesticides and increased emphasis on non-chemical control.

2. Rigorous controls of several classes of dangerous pollutants - PCBs, etc.

3. Greater funding of environmental research (though still sadly inadequate).

4. Preservation of certain parklands, wilderness areas, sensitive marshes, and the like.

5. Actions to prevent heedless and destructive development in some of our urban centres.

6. Development of some systems for recycling and conservation and for the disposal of wastes.

7. And, finally, the significant changes in attitudes and perceptions that have led to such things as some of our political parties actually developing environmental platforms and formulating environmental Bills of Rights; to industries bringing forward environmental policies; to most of us seeing the hollowness, indeed vacuity, of statements, almost exactly ten years ago, to the effect that Canada has an abundant supply of oil for the next 1500 years; to most of us being outraged by statements to the effect that pollution is caused by rocks and trees and that if Environmentalists have their way we will all be living in rabbit holes and birds' nests.

The list of such "successes" is quite a long one and we can take some satisfaction in it. We have come a long way in ten years, *but* we still have a very long way to go.

During this decade we have achieved other advances as well, advances which in final analysis are more positive than the banning of *this* chemical or restrictions of *that* emission. The first of these is the degree to which we have institutionalized our environmental concerns. Institutionalization may have its disadvantages and dangers (complexities of organizations, bureaucratization, a civil service run rampant) but it *is* the way in which societies demonstrate their recognition of the importance of an issue and their determination to do something about it. Modern society is helpless to tackle a problem for which it has not first provided an institutional framework.

This report is based on a paper presented during Environment Week in Toronto in October 1980 which is intended for publication in *Alternatives*.

Thus we have seen, in the last decade, in every province and at the federal level, the establishment of departments responsible for our environmental affairs. Ottawa, and almost every province (notably not Ontario), now has an Environmental Council of one form or another to provide advice to governments. Environmental legislation and attendant regulations have sprung up on every side: EARP, FEARO, EA ACTS, EP ACTS, EA BOARDS, and hearing and appeal mechanisms. We can certainly question in this year 1980 how effectively these mechanisms have been used to date, but at least they are now in place, whereas ten years ago they were not, and we can use them effectively and vigorously if we have the collective determination to do so.

Many senior officials in departments of environment across Canada, and certainly in Ottawa, have developed a sincere commitment to protection and preservation. They are now much more than administrators in the bureaucracy of government. From the point of view of legislation, regulation, and the development of sound environmental policies, this may be one of the most significant developments of the last decade.

We have institutionalized our environmental concerns in other ways as well. Our schools now teach subjects of environmental relevance as a matter of course, whereas in 1970 a school thought itself progressive if it had a guest lecturer or two during the year to talk about the environment. Our universities have created faculties and institutes of environmental studies, and related course programmes. We have seen specializations in environmental law, environmental biology, environmental this and that, emerge over the decade, whereas formerly there were none.

Similarly, in the industrial sector, some companies have institutionalized their environmental planning and management as matters which receive full consideration in field operations, plant activities, and at the corporate level.

And, finally, over the last ten years we have witnessed the institutionalization of our environmental concerns emerge in the private sector, as represented by the phenomenon we refer to as environmental public interest groups. These organizations have become a real force in our political and governmental systems and they are now an accepted and respected part of the fabric of our society.

I cannot leave the discussion of achievements without commenting on one final encouraging development. In the late 60's, environmental problems were seen almost exclusively in the context of science and technology and it was through these disciplines alone that solutions were sought. Over the last decade it has been increasingly recognized that this was dangerously simplistic and that the scientific and technical aspects of environmental issues are only part of a much larger picture. This picture is now seen to include the whole areas of human values and ethics, of social wants and needs, of economic and political science - indeed almost every field of human interest and inquiry from philosophy to physics. I find this development greatly encouraging and one that bodes well for the future.

From an international perspective, the Stockholm Conference undoubtedly concentrated world attention on environmental issues and gave nations with the will a springboard for action. Consciousness of the need to protect the environment remains low, however, in most underdeveloped countries and in the long run this may be the greatest threat to the global ecosystem. We all can understand and sympathize with this: poverty and starvation do not lead to environmental sensitivity. Nevertheless, there is a limit to the success of environmental policies in Canada and other developed countries in a world that does not yet share our environmental concerns.

To be fair and maintain balance when reviewing the successes of the last decade, I should pause for a moment to mention also some notable failures. I include in these our failure to significantly limit the consumption of energy and to develop alternative sources of energy; our failure adequately to control the release of toxic chemicals into our environment and to develop safe methods for the disposal of toxics, including nuclear wastes; and our failure to develop policies in the areas of energy, land use, and the northern environment. Canada does not, even now, have a clear-cut, explicit policy regarding the environment, though one is being developed in the Department of Environment. Motherhood statements are frequent, but it is not acceptable to pay lip service to the environment and then to proceed heedlessly on courses of action guaranteed to destroy it. Some of these failures will be considered in greater detail when I discuss the future.

However, let us return to our consideration of achievements. All of these achievements of the past decade lead me to my most important observation regarding the environment in the 70's, an observation which sets the stage for looking ahead to the next ten years. There is abundant evidence that public interest in and concern over environmental affairs has not waned in spite of assertions to the contrary during the last few years. In poll after poll, Canadians continue to include the environment among their top concerns, right up there with inflation and unemployment. In a recent survey conducted for the Ontario Ministry of the Environment and reported in the current issues of *Seasons* (the new and most impressive publication of the Federation of Ontario Naturalists), "pollution" came fourth in our list of concerns. Ten percent considered it to be the most important problem facing Ontario, 87 percent favour stricter environmental protection, 62 percent think this would improve their standard of living and 80 percent think it would enhance the quality of their lives. In answer to the question "Are you more or less concerned about pollution problems now than a year ago", 67 percent were more concerned and only 6 percent less. In my view this is pretty conclusive evidence of substantial environmental concern.

Our interest and concern, however, have become much more sophisticated and knowledgeable over the decade just ended. No longer do we witness the innocence of a mock funeral for a polluted river. Today, we are more likely to see thoroughly informed people with environmental concerns challenging a hydro-electric utility in formal hearings about the narrowness of its procedures for calculating the true cost of generating electricity, or its projections of future demand. We see people in the Maritimes becoming knowledgeable about the pesticide Matacil before protesting its use in forest spraying in New Brunswick, and successfully stopping its use in Nova Scotia. We see non-governmental groups becoming as informed as government and industry officials about issues of the Arctic environment. The list of examples of this developing understanding and sophistication is a long one, and it is a healthy phenomenon which promises well for the Canadian environment in the long run.

Another feature of this is the growing understanding that "Environment" is a component of other issues of public concern for which different labels are used. Hence, *energy, land use, food additives, forestry, agriculture* and *wildlife* all have strong environmental content, and when Canadians express their concern on these issues they often are expressing their basic environmental concerns as well. Environment runs as a theme through most of the issues that are of concern to contemporary society.

There are several dark sides to the optimism that I have expressed above. One is that Canadians are in danger of becoming almost complacent about some environmental problems. One example of this is the service provided by the Ontario Ministries of Environment and of Natural Resources in annually publishing *A Guide to Eating Ontario Sports Fish*. Lake by lake and species by species, this guide relentlessly indicates which fish are safe to eat and which are too contaminated by mercury, DDT, Mirex, PCBs, and other pollutants for safe consumption. Many sportsmen and their families use this guide as it is intended, but too often matter-of-factness has blunted the sense of outrage we all should share that our lakes have become so contaminated that a guide is necessary to eating their fish safely in the first place. And where is our determination to so order our environmental affairs that, at some point in the future, such a guide will no longer be needed, and once again we can fish and enjoy our catch without being afraid of poisoning ourselves?

Another dark side to optimism leads me to look ahead into the future. It is an evident fact that our most pressing environmental problems are becoming worse with each passing year. One encouraging feature associated with this observation is that over the past few years we have sharpened our focus and begun to put priorities on the host of environmental issues with which we must grapple. Hence, a succession of Ministers of the Environment have put toxic chemicals, acid rain, and water quality near the top of their priority listings. To these can be added the issues of Canada's northern environment, wildlife and overharvesting of other renewable resources. However, setting aside the encouraging fact that at least priorities are beginning to be established, it remains that these priority problems generally are getting worse, not better.

In central and eastern Canada, the problem of *acid precipitation* is receiving widespread attention. With the announced intention of Presidents Carter and Reagan of giving greater emphasis to the use of coal for generating electricity in the United States, and with our own lack of firm resolve in controlling point sources and the emission of sulphur dioxide and nitric oxide from automobiles, it would seem that the harmful effects of acid precipitation can only continue to escalate. Several hundred lakes in Ontario already are biological deserts because of acidification and, by the Ontario Government's own calculation, thousands more are threatened *at present emission levels*. With every evidence that acid precipitation will increase, the future of these lakes seems bleak indeed.

Investigations of other effects of acid precipitation are in their early stages, in particular damage to vegetation and effects on soil. Already, however, it seems clear that damage to buildings in Canada runs to many millions of dollars each year. The study of the effects of acid precipitation on human health is also in its infancy, but already there are disturbing claims that these effects are not insignificant.

The issues of *toxic chemicals* and ecotoxicity are equally disturbing. There are a number of particularly serious aspects of this issue. Our far too careless approach to the transportation of toxic chemicals was highlighted by the recent massive chlorine spill in Mississauga, Ontario, and by a PCB spill in Regina, Saskatchewan. Attempts to develop safe facilities for the disposal of toxic wastes have created unresolved controversy and confrontation in communities across Canada. The introduction of new synthetic toxic chemicals into our industry and commerce remains largely unregulated except for pesticides, food additives and drugs. There are literally thousands of these chemicals now in our environment and hundreds more are introduced each year. As more analyses are done, more and

more toxics are discovered in our waste systems and in indicator organisms such as sportfish referred to earlier. Yet, in spite of all these disturbing observations, the science of toxicology is still almost in its infancy in Canada, both as to our ability to train modern toxicologists to meet our rapidly expanding needs for research, monitoring and regulation, and as to our ability to develop techniques for studying complexes of chemicals in the environment and their effects on organisms - *ecotoxicity*.

In contrast to this generally negative picture, there are a few bright spots. The effects of banning DDT a decade ago are now being realized, with lower residues of this pesticide in falcons, lake trout and other wildlife in some parts of Canada. And with the recent ban on PCBs, in a few years we may expect to enjoy a similar relief from contamination by these substances. Nevertheless, despite these advances, toxic chemicals remain one of the most serious and pressing environmental problems of our times.

Water is a medium where a number of environmental problems have their focus, including toxics and acid precipitation, but also sewage, siltation, agricultural run-off and a host of others. Canada made progress in preserving the quality of our water systems in the early part of this decade by restricting the use of phosphates in detergents, and several provinces have made important progress in controlling sewage pollution. However, in other provinces, sewage treatment still seems to be viewed as an unnecessary frill rather than a condition of modern civilization.

Water quality, then, remains a matter of deep concern in virtually every water system in southern Canada and it is given high priority in most jurisdictions. Because Canada shares many of its water systems with the United States, actions to protect and restore water quality require international agreement and cooperation.

Canada's extensive northern regions have a complex of environmental problems and potential problems, exacerbated by tangled and sometimes competing jurisdictions, which too often vie for power rather than addressing the problem, and negative confrontations between the forces of development and those of preservation. The *offshore search for hydrocarbons* has created what is probably the single greatest environmental issue North of 60°, with many experts, including those in government, industry and the private sector, agreeing that the momentum of exploration has far outstripped our capacity to deal with the environmental problems that may result. It is not, of course, simply the drilling and extraction that pose the problems, real and potential, but the entire infrastructure that supports the exploration and will be needed to service production, from tankers and pipelines to storage facilities and new communities. Canada's research effort in the North is seriously inadequate in a number of key subject areas, and the view has frequently been expressed that Environment Canada should have a more explicit and emphatic mandate for environmental affairs in the North. The Drury Commission recently expressed a similar view.

Canada's major *wildlife* problems largely centre on the North as well. Overhunting seems to pose the most serious threat, but there are site-specific problems as well, for example, the Dempster Highway, and future pipeline construction poses new problems. Allegations are legion regarding overhunting by northerners, especially of caribou and marine mammals. One thing seems certain -

the effort expended on wildlife research and management, and on enforcement of regulations, is grossly inadequate, and on some key species it is actually shrinking. When separate censuses of a single caribou herd can vary by more than 100 percent, obviously there can be no sound basis for management of the herd. With modernized hunting methods, tangled jurisdictions, an uncertain legislative base and inadequate regulation, the equation could well spell disaster for some species.

This is not to say that Canada's wildlife problems occur only in the North. We in southern Canada have much to account for as well, though the species we have abused generally are less spectacular than those in the Territories. Pesticides, other pollutants and habitat destruction have eliminated or placed in serious jeopardy many forms of wildlife in southern Canada - from the extinction of the Atlantic salmon and blue pickerel in Ontario, to the endangered peregrine falcon, bluebird, spotted turtle, blue racer, and many other animal species. To this list can be added a number of endangered plants.

In a related vein, there are serious problems of overharvest with other so-called renewable resources in Canada. With the evolving policy of greatly increasing the harvesting of our *forests* in the next two decades, for example, there is serious danger of depletion without an effective and much expanded programme of replacement, and of the forest industry expanding into sensitive and unique areas.

In the area of *fisheries*, almost all of our marine commercial and sports fisheries seem to be overharvested and in danger of depletion. The catch of nearly every major species from the Atlantic salmon to cod and groundfish, seems to be dwindling. With the salmon, part of this can no doubt be attributed to the destruction and pollution of spawning waterways, but overharvesting of all of these species lies at the heart of the problem.

Another problem of rapidly increasing importance is that of the impacts of *recreational activities* on areas of special environmental interest and sensitivity - parks, wilderness areas, ecological reserves, and the like. As leisure time grows and Canada's (and the world's) population continues to grow, pressures on these areas will become ever more acute and the conflicts between the developers and the preservers will intensify. We have seen this recently in the conflicts over the twinning of the Banff Highway, the plan for Kluane Park in the Yukon, and the situation in Ontario regarding Algonquin and Killarney Parks.

And, finally, and to some eyes most important, one cannot consider the future in an environmental context without placing the issue of *energy* front and centre. As oil and gas come into shorter supply in the years ahead, issues of using "dirty" alternatives such as coal, of searching for new supplies in prospective areas, of land use, and of conservation will become increasingly important. Energy lies at the heart of the problem of environment - or perhaps I should state that in reverse: environment lies at the heart of the energy problem. Energy *is* environment!

This, then, is a brief overview of some of the major environmental issues confronting Canadians in the next decade. In it, I have touched on problems of acid rain, toxic chemicals, water quality, the northern environment, wildlife, habitat destruction and overuse of resources. If we trace the origins of each of these, we will find at the source our contemporary life style and the human fascination with growth and consumption. There are some who argue that the changes that are required in the ways in which we conduct our human affairs will be so profound that there really is no way to get to where we must go from where we are now. This is to counsel despair and most of us, I think, are too optimistic to succumb. We have taken significant steps to solve some of our environmental problems and we have created an administrative and legislative framework within which we can act in the future. On some fronts there is cause for cautious optimism. On others, there is cause only for deepening concern and an urgent need to reaffirm our commitment to the solution of our environmental problems in Canada.

ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS:

OBSERVATIONS AND RECOMMENDATIONS

I. INTRODUCTION

In December 1978, the Minister of Environment asked the Canadian Environmental Advisory Council to conduct a review of the Environmental Assessment and Review Process (EARP) and the relationship of the Federal Environmental Assessment Review Office (FEARO) with the Department of Environment (DOE).

Accordingly, Council established a Task Force (P. Garigue, M.J. Loveys, D.A. Chant and T. Beck) which held discussions with FEARO personnel, public interest groups, a representative of industry, staff of other federal departments concerned with the Process, and with a member of the Ontario Ministry of the Environment.

The Task Force concluded that an examination of the effectiveness of the Environmental Assessment and Review Process (the Process) was the main pursuit to be undertaken. This is addressed in this report in the form of a list of 23 recommendations; they represent the findings of the Task Force which have been discussed and endorsed by the full Council. It is recognized that the implementation of a number of these recommendations will require more resources than are at present available to FEARO, and that additional funds and personnel must be secured to ensure the effective operation of the Process. The degree to which the recommendations are accepted and implemented will reflect, in the opinion of Council, the importance which the Government of Canada attaches to the resolution of the environmental problems facing our nation.

A number of principles were identified which governed Council's choice of recommendations. These should form the basis for procedures developed to improve the Process:

- The Minister of Environment and not the initiating agency[4] should have the final decision of whether an environmental assessment review is required;
- public participation is a vital part of the Process;
- notwithstanding the desirability of public monitoring and involvement in the Process, DOE should present the environmental point of view at all stages of the Process;
- monitoring the compliance of conditions attached to a project is essential;
- the independence and strength of panels and hearings must be increased;
- initiating agencies must be accountable to FEARO and to the Canadian public for decisions made at the screening stage;
- DOE projects should be subject to the Process.

The Process has been improved through experience and its capacity for further improvement and adaptation must be maintained.

The Process, no matter how much improved, will not in itself ensure environmental protection. Certain kinds of initiatives, in particular site specific developments, are amenable to assessment by means of the present Process, though some improvements are desirable. Other environmental issues, such as the impact of new technologies, the individual or synergistic effects of new chemical compounds, financial subsidies and cost sharing agreements, general policies related to resource development or the cumulative effects of small projects do not readily lend themselves to evaluation by the Process. It is the particular responsibility of DOE to develop innovative procedures and approaches to ensure environmental evaluation of such issues.

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[4] "agency" includes government departments and quasi-government organizations such as Crown Corporations.

The Environmental Assessment Review Process cannot take the place of comprehensive environmental processes and policies for Canada. Nevertheless, the Process is and must continue to be an important and necessary part of the means by which Canadians can ensure the continued quality of their environment.

II. THE PANEL HEARINGS

The panel hearings, with an allocation of 10 man/years in FEARO, are by their nature the most publicly visible part of the Process. Perhaps due to this visibility, they have been in some respects the most conspicuous aspect of federal environmental decision-making. The hearings are the part of the Process that have received the most criticism but Council recognizes that the hearings are evolving and improving as experience is gained. Flexibility to evolve should be maintained, in particular to develop the ability to hold not only formal sessions to examine technical questions but also informal, less structured and potentially less intimidating sessions to hear local expression of opinions.

1. The panel hearings have no legislative mandate. This lack of authority results in the fact that the panel members and intervenors are unable to subpoena either witnesses or information, and weakens their ability to insist that all relevant information be brought forward.

POWER OF SUBPOENA

It is recommended that FEARO look into ways of establishing a power of subpoena for the panel hearings.

2. The skill, perception and rulings of the chairman are major factors in determining the quality of the panel hearings. It is often the perceived shortcomings of the chair that give rise to adverse criticism, and this may be partly due to an unreasonable workload. As of September 1979, three FEARO staff members were chairing 15 projects. This workload is excessive.

PANEL CHAIRMAN

It is recommended that:

i) the number of chairmen on FEARO staff be increased.

ii) the chairmen be given appropriate career advancement opportunities within FEARO in order to retain their services.

iii) each chairman be assigned few enough projects so that he/she will have the time required to evaluate and improve the quality of the Process as well as to attain a thorough knowledge of the issues, prepare analyses and produce reports.

iv) strong consideration be given to appointing, as the occasion demands, chairmen from outside the public service.

3. The credibility of the hearings depends in large measure on the perceived capability and objectivity of the panel members. The composition of the panels should be balanced, with members from industry, government, university, the informed public and local residents. It is recognized that securing qualified candidates who are able to commit their time is a continuing problem.

PANEL COMPOSITION

It is recommended that:

i) efforts be made to establish a standing list of potential panel members from industry, university, government and the public who can be canvassed for their availability for each hearing.

ii) panel members receive intensive preparation for their role on particular panels.

iii) arrangements be made to relieve them completely of their normal duties so that they can devote the time required to their panel responsibilities.

iv) increased efforts be made to secure panel members with knowledge of and sensitivity to local situations, attitudes and concerns relevant to the project.

v) proponents or persons with vested interests be excluded from membership on panels.

4. The 1977 Cabinet Memorandum permits the appointment of panel members a) from within the federal public service by the panel chairman in agreement with the initiating agency; and b) from outside the federal public service by the Minister of Environment in agreement with the Minister responsible for the initiating agency.

APPOINTMENT TO PANEL

It is recommended that the initiating agency should have neither the right to, nor a veto over, panel membership.

5. Through the actions of the panel and the participation of the panel secretariat, FEARO should actively ensure that all major issues and points of view are fairly and adequately presented at the hearings.

ROLE OF THE PANEL

It is recommended that:

i) the panel evaluate all information disseminated prior to the hearing by the proponent or initiating agency or any other intervenor and interested party, in order to determine its veracity or possibility of ambiguity, and that the panel exercise its judgement in calling witnesses to clarify potential misconceptions.

ii) the panel ensure that there is an adequate range of balance of opinion of experts and intervenors at the hearing.

6. It is recommended that:

ROLE OF SECRETARIAT

i) the panel secretariat assist the panel with 5(i) and 5(ii) above.

ii) the panel secretariat should not become a screening mechanism but should assist the panel in bringing information forward.

7. The Department of Environment has a basic responsibility to protect and enhance the quality of the Canadian environment. As the agency commanding a wide pool of expertise, it has a vital role to play in the assessment of environmental impacts.

ROLE OF DOE

It is recommended that:

i) DOE continue to play a major role in the setting of guidelines for impact assessment work, in peer review of the assessment, and in providing departmental expertise to the hearing.

ii) DOE present to the Panel a thoroughly researched position on the project, including the potential impacts of a project, and the potential for mitigating such impacts.

8. Government experts who can make the most valuable contribution to the panel hearings are most often those whose principal jobs and principal interests involve their research activities. Participation in EARP hearings detracts from and interrupts individual or group research programs, a situation already aggravated by budget cuts, and excessive periods of detachment to serve as experts may influence their normal career opportunities. Nevertheless, some projects have potential impacts of such magnitude that the best persons should contribute their expertise to the decision-making.

EXPERT WITNESSES

It is recommended that the responsibility of government agencies to contribute to the Process at all stages, including participation in the hearings, be recognized and scheduled as a regular part of the work load, as well as being made an important individual career advancement criterion.

9. The analysis of the costs and benefits of citizen participation is complex and defies quantification. However, for many projects, the Process provides the only opportunity for concerned citizens to be heard on the broad range of issues and the only chance to be involved in the decision-making process. Accordingly, citizen participation should be given as much encouragement as possible as one of the raisons d'être of the Process.

FEARO should be in a position to influence the availability of funds to support such participation according to the scope and scale of the project, the extent of the affected area, the significance of the potentially threatened resources, and the national significance of the project.

CITIZEN PARTICIPATION

It is recommended that:

i) given the disparity between the resources available to some proponents and initiating agencies and those available to local community or public interest groups or individuals, funds be made available to such groups for research costs and other expenses where, in the opinion of the panel, the information and points of view to be presented are relevant and worthwhile.

ii) these costs of participation be borne by the proponent and/or initiating agency, unless the panel directs otherwise.

iii) the determination of the total amount of funds to be allocated to support intervention should be made well in advance of the hearings, and a substantial portion of funds allocated be provided in advance to permit adequate preparation of the intervention.

iv) the format and scheduling of the hearings be designed to assure adequate quality and scope of participation. In particular, some sessions of the hearings should be held in locations easily accessible to intervenors who have demonstrated interest in the project, especially where the issues are of national importance.

III. THE SCREENING PROCEDURE

FEARO has acknowledged the importance of the screening procedure by assigning three staff positions to encourage and assist the initiating agencies in this regard. The great majority of projects receive any kind of screening only within the initiating agency, and FEARO has endeavoured to facilitate this procedure by preparing a *Guide for Environmental Screening*. Council considers that there is need for certain improvements in the screening procedure, either by additional or more stringent requirements.

10. Notwithstanding the *Guide for Environmental Screening*, agencies vary greatly in the importance and consistency they apply to their method of initial screening of their projects. They are expected to provide information to and obtain comment from the public, but are not required to do so. An inconsistent approach inhibits citizen input, makes it difficult for FEARO to monitor the quality of the screening, and results in uncertainty.

CONSISTENT APPROACH

It is recommended that each initiating agency be required to formalize, document and make public its procedure developed for initial environmental review of its projects; and that FEARO include this information in its explanatory literature regarding the Process.

LISTING OF PROJECTS

11. *It is recommended that each agency provide to FEARO, and FEARO publish bimonthly, a list of all projects or programs*

    i) of a cost greater than $1 million that were approved without an environmental hearing;

    ii) that received initial screenings, with brief statements of the findings and the conclusions regarding the need for further study;

    iii) for which Initial Environmental Evaluations were completed, with the major findings, alternatives and conclusions resulting from further review.

PUBLIC RESPONSE

12. *It is recommended that FEARO develop means of assessing responsible public reaction to the published decisions relating to the screening and IEE stages; and that the Minister of Environment require an evaluation of any decision against further review if reasonable representation is received within a stipulated period of time following publication, from the public or from another agency.*

13. The Process should not be dependent on the uncertain resources and demonstrated concern of public interest groups or individuals, notwithstanding Recommendation #12.

ROLE OF DOE

It is recommended that DOE continue to provide technical advice to initiating agencies to assist them in reaching appropriate screening decisions and that DOE consistently monitor the published screening decisions so as to be in a position to provide timely advice to the Minister if environmentally inappropriate screening decisions have been taken.

14. The proponent is not always aware of the reasons for decisions resulting from the screening procedure regarding environmental acceptability, or of the criteria used to determine the extent of environmental impact which would determine if a project should be subjected to the full Process. This lack of information is aggravated by the inordinate length of time required by some government agencies in coming to a decision.

RELATIONS WITH PROPONENTS

It is recommended that FEARO, in conjunction with the initiating agency:

i) provide an explanation of decisions to the proponent;

ii) establish minimum criteria regarding "potentially significant environmental effects" in order to help determine whether or not a project should proceed to the panel hearings stage of the Process;

iii) make efforts to expedite the initial screening procedure without sacrificing the quality of the assessment.

IV. THE SCOPE OF THE PROCESS

15. During the assessment of some projects, analyses of the need and of the options available are necessary for the proper evaluation of acceptable environmental risks. It is advantageous to both proponent and public to have the opportunity to discuss the question of need and alternatives at one or more stages of the Process, which is understood to be the current practice. In addition, many government policies in the past were formed with little or no environmental consideration. As the federal *environmental* process, the Process should have the latitude to criticize government policies on environmental grounds.

ANALYSIS OF NEED

It is recommended that:

i) the guidelines for the environmental assessment explicitly state whether or not need and options will be part of the terms of the study and hearings; and if so, that the proponent be required to submit information on the need and options as part of their impact statement;

ii) the panel explicitly include its analyses of need and options as part of its evaluation, as it sees fit;

iii) the panel should require that the government policies relevant to the project be explicitly stated during the hearings, but should not accept them as absolutes if their environmental effects are considered substantial.

16. The analysis of socio-economic impact is an essential element in the proper evaluation of environmental impact. The question concerns the appropriate future use of the area or resource concerned rather than the acceptability of impact.

SOCIO-ECONOMIC IMPACT

It is essential that the socio-economic impact of the project be considered an integral part of the assessment to the extent considered appropriate by the panel.

17. At present, only discrete *projects* are evaluated under the Process. To avoid repetitious hearings on the one hand and ad hoc decisions on the other, it is desirable that *programs* and *policies* be also evaluated for their environmental impact, preferably before their adoption. In most cases, this is best accomplished by means of environmental scrutiny by DOE, and consultation with other departments. In some cases, a review by a panel under the Process might be an appropriate way to evaluate the environmental impacts of a policy or program.

ASSESSMENT OF PROGRAMS AND POLICIES

It is recommended that:

i) the Minister explore the range of ways by which policies and programs of the federal government may be subjected to environmental scrutiny;

ii) criteria be developed by which to determine which policies and programs are most appropriately evaluated by the present Process.

18. Class assessments, which are used in Ontario and several other jurisdictions, may be useful tools for the assessment of some policies, and more likely for some programs. Class assessments are conducted for certain types of projects, such as logging roads or specific industrial processes. After completion of a class assessment, specific projects need be assessed only so far as they have particular characteristics or potential impacts that differ from the general case.

Another useful format might be derived from the procedures of the National Energy Board (NEB). The NEB holds general hearings, e.g., on the demand and supply of natural gas in Canada, to provide a context for specific projects, e.g., export applications. FEARO could hold hearings on the environmental sensitivity and productivity of a region, which would expedite and provide a context for development in that region.

CLASS AND REGIONAL ASSESSMENTS

It is recommended that FEARO examine the class assessment, regional assessment and other study formats for potential usefulness in assessing the environmental impact of projects, policies and programs.

19. Crown Corporations are at present only *invited* to consider themselves subject to the Process.

CROWN CORPORATIONS

It is recommended that steps be taken to ensure that the Process can be applied to projects which are the responsibility of Crown Corporations or other government agencies presently exempt.

20. At present, the Process applied only to projects where federal funds or lands are involved. There are cases where the federal government has a regulatory or controlling role regarding projects with potential environmental impact.

LICENCES OR PERMITS

It is recommended that consideration be given to expanding the mandate of the Process to cover all projects of environmental significance to which federal licences or permits apply.

21. In some cases, the panel recommends that a project may proceed contingent on efforts to mitigate environmental impact. The responsibility for monitoring the project for compliance is unclear and indeed projects have proceeded without mitigating measures.

MONITORING

It is recommended that:

i) FEARO designate an agency to monitor projects for compliance. This monitoring agency would normally be DOE except in cases where DOE is the initiator of the project.

ii) that FEARO be empowered to intervene if conditions for environmental protection are not being met.

PUBLICATION OF REPORTS

22. *It is recommended that the Minister give prior blanket approval for panel reports to be made public without the necessity of obtaining agreement from other agencies.*

23. Council considered various reporting arrangements and the matter of FEARO autonomy.

REPORTING RELATIONSHIP

It is recommended that FEARO continue to report directly to the Minister of Environment, and to be independent of the Department.